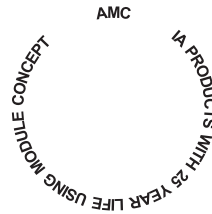


# AMC TR1a

**WiFi Wireless Transmitter**

*with Video On Demand and Broadcasting*



**INSTRUCTIONS FOR INSTALLATION AND OPERATION**





CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



AFIN DEVIÉTER UN CHOC ELECTRIQUE ET LES CONSEQUENCES GRAVES QUI POURRAIENT EN RESULTER, TENÉTEZ PAS D'OUVRIR L'APPAREIL ET DE TOUCHER AUX COMPOSANTS INTERNES SANS LA PRESENCE D'UNE PERSONNE QUALIFIEE.



PARA REDUCIR EL RIESGO DE SACUDIDAS ELECTRICAS, NO DEBERA QUITARSE LA TAPA (NI PARTE POSTERIOR). CONSULTESE AL PERSONAL CAPACITADO PARA LAS REPARACIONES INTERNAS.

**WARNING:** TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.  
**ADVERTENCIA:** PARA EVITAR EL RIESGO DE INCENDIO O SACUDIDA ELECTRICA, NO DEBERA EXPONERSE ESTE APARATO A LA LLUVIA O HUMEDAD.

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARISED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE..

**ATTENTION:** POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR. UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SILES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

**PRECAUCION:** PARA EVITAR SACUDIDAS ELECTRICAS, NO DEBERA UTILIZARSE ESTA CLAVIJA POLARIZADA CON UN CORDON DE PROLONGACION, RECEPTACULO U OTRO TIPO DE SALIDA A MENOS QUE SE HAYAN INSERTASO COMPLETAMENTE LAS LENGÜETAS PARA EVITAR SU EXPOSICION.

**NOTE:** Some AMC products are equipped with dual or multi-voltage transformers (which is indicated on the back panel). If you wish to change the voltage, please bring your unit to an authorised AMC service technician for internal conversion.

**ATTENTION:** Quelques pièces AMC sont munies de transformateurs à double ou à multi-voltage (indiqué au panneau arrière). Si vous voulez changer le voltage, veuillez apporter votre appareil au fournisseur de AMC pour le transformer.

**ZUR BEACHTUNG:** Einige AMC Geräte sind mit Umschaltern für unterschiedliche Netzspannungen ausgerüstet (Ein Vermerk auf der Rückseite weist darauf hin).

Die Anpassung, wenn notwendig, muß von einem qualifizieren Techniker in einer AMC Servicestation vorgenommen werden.

**NOTA:** Ciertos componentes de AMC están dotados de transformadores de doble tensión o de varias tensiones (lo que se indica en el panel posterior). Si se desea cambiar la tensión, sírvanse llevar el aparato a un técnico autorizado por AMC para su conversión interna.

**NOTE TO CATV systems installer:** This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

**NOTA PARA EL INSTALADOR DE ANTENAS DE TELEVISION COLECTIVAS:** La presente advertencia se provee para llamar la atención del instalador al Artículo 820-22 de NEC (Código Eléctrico Nacional) donde se facilitan las directrices para la pertinente puesta a tierra y que especifica en particular que el conductor a tierra del cable debe conectarse al sistema de conexión a tierra del edificio, lo más proximo posible al punto de entrada del cable.



The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of un-insulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

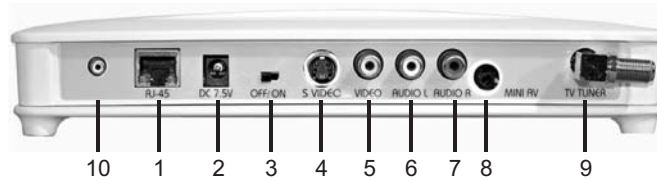
# CAUTIONS AND FEATURE LIST

## FEATURES OF THE AMC<sub>TM</sub> MODEL TR1a

- \* with Video on Demand and Broadcasting features.
- \* Wireless IEEE 802.11a 5 GHz WiFi configuration.
- \* Internal NTSC / PAL or SECAM / PAL dual band TV Tuner.
- \* Multiple audio and video inputs supported.
- \* Three external Video Inputs :
  - S VIDEO input: one S connector
  - AV1 input: Composite Video (three RCA Connectors - Video, L & R)
  - AV2 input: Composite Video (one 3.5mm Mini connector - Video, L & R)
- \* MPEG II video chip Encoder
- \* Video Scaler: 3D video image chip
- \* The receiving units must be within approximately 65 - 100 feet (20 - 30 meters) of the TR1a to send and receive transmissions clearly. However, this distance will vary, depending on the surroundings. At home, it is best to set up the base station in a central location, allowing more even distribution of the wireless signal to all parts of the house.
- \* Accessories: Stand x 1, Power Adaptor x 1 (Input: 100~240VAC 1.0A max 20~30VA 50/60Hz, Output: 12VDC 1.0A 12W max) , Remote Control x 1, RCA AV Cable x 1 (for AV1 composite Video input) (3 RCA plugs to 3 RCA plugs), 3.5mm mini jack to 3 RCA plugs AV Cable x 1 ( for AV2 composite Video input), S-video cable x 1 (For S VIDEO input) (Audio inputs of S VIDEO input are common use with Audio input RCA connectors of AV1), TV Tuner input adaptor, External Antenna x 1, IR Blaster Cable x 1, User Manual x 1.

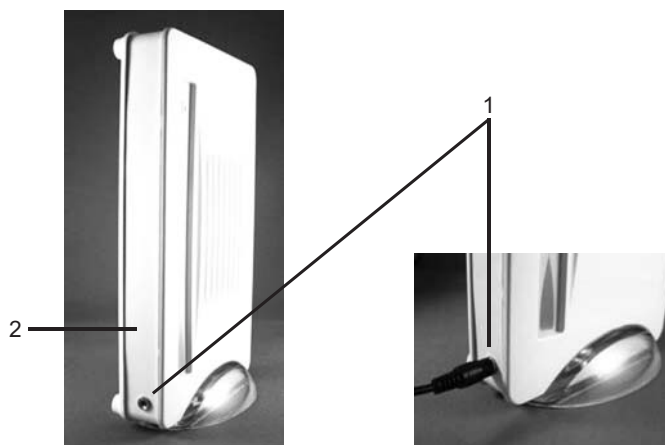
# REAR & FRONT SIDE PANELS / FRONT PANEL

## REAR & FRONT SIDE PANELS



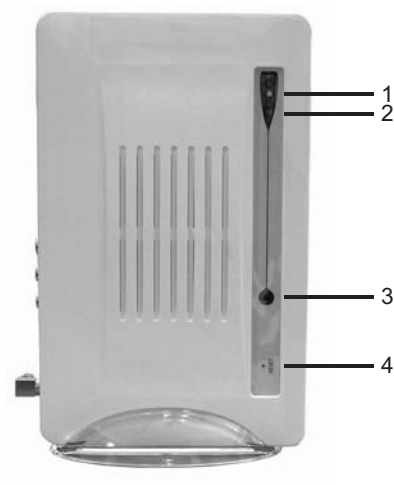
1. "RJ-45"
2. "DC 12V" power input connector RCA connector (Red)
3. "OFF/ON" Power Switch
4. "S VIDEO" input connector 3.5mm mini connector(Video, L, R)
5. "AV1" Composite Video input RCA connector (Yellow)
6. "AV1" Audio L input RCA connector (White)
7. "AV1" Audio R input RCA connector (Red)
8. "AV2" Composite Video input 3.5mm mini connector(Video, L, R)
9. "TV Tuner" input connector
10. WiFi External Antenna

## FRONT SIDE PANEL



1. Connector for IR Blaster
2. Connector for Stereo Audio Pre-Out (option)

## FRONT PANEL



1. LED 1 (Orange) Wireless LED
2. LED 2 (Green) Power LED
3. LED 3 (Red) Tuner Status
4. RESET

## FREAR SIDE PANEL

### 1. RJ-45

The RJ45 is for updating firmware of TR1a or hooking TR1a to Ethernet Network for linking TR1a to all other equipment with IP addresses linked to the Ethernet Network.

### 2. "DC 12V" power input connector

This DC 12V power input connector is for connecting 12VDC power from TR1a Power Adaptor to the TR1a.

### 3. "OFF / ON" Power Switch

Slide the switch to left hand side will turn the power of TR1a OFF. Slide the switch to right hand side will turn the power if the TR1a ON.

### 4. "S VIDEO" input connector

This is an input connector for "S VIDEO" sources.

### 5. "AV1" Composite Video input RCA connector (Yellow)

This is Composite Video input RCA connector (Yellow) for AV1 for hooking to Composite Sources.

### 6. "AV1" Audio L input RCA connector (White)

This is Audio L input RCA connector (White) for AV1 for hooking to Composite Sources.

### 7. "AV1" Audio R input RCA connector (Red)

This is Audio R input RCA connector (Red) for AV1 for hooking to Composite Sources.

### 8. "AV2" Composite Video input 3.5mm mini connector (Video, L, R)

This is a 3.5mm mini connector with Video, L, R for Composite Video "AV2" input for hooking to Composite Sources.

### 9. "TV Tuner" input connector

This is a connector for hooking to TV Antenna or Cable TV's.



### 10. WiFi External Antenna

This connector is for hooking to external 5GHz 802.11a WiFi Antenna.

## FRONT SIDE PANEL

### 1. Connector for IR Blaster

The 3.5mm mini connector is for IR Blaster Output. IR Blasters can be hooked up to the connector.

### 2. Connector for Stereo Audio Pre-Out (Option)

The 3.5mm mini connector is for Stereo Audio Pre-Out. The Pre-Out is for

connecting to external Stereo Audio systems and the latency between the Pre-Out and Video will have to be adjusted by time delay module. So, the Pre-Out is an option and will be installed for special designed projects and according to special orders only.

## FRONT PANEL

### 1. LED 1 (Orange) Wireless LED

Blinking slowly : wireless is connecting  
Blinking quickly : wireless is connected and transmitting data.

### 2. LED 2 (Green) Power LED

This is a Power On LED.

### 3. LED 3 (Red) Tuner Status

Tuner Initialization Confirmed

### 4. RESET

This is a switch to reset TR1a. When TR1a experiences unstable operation or trouble for connecting,

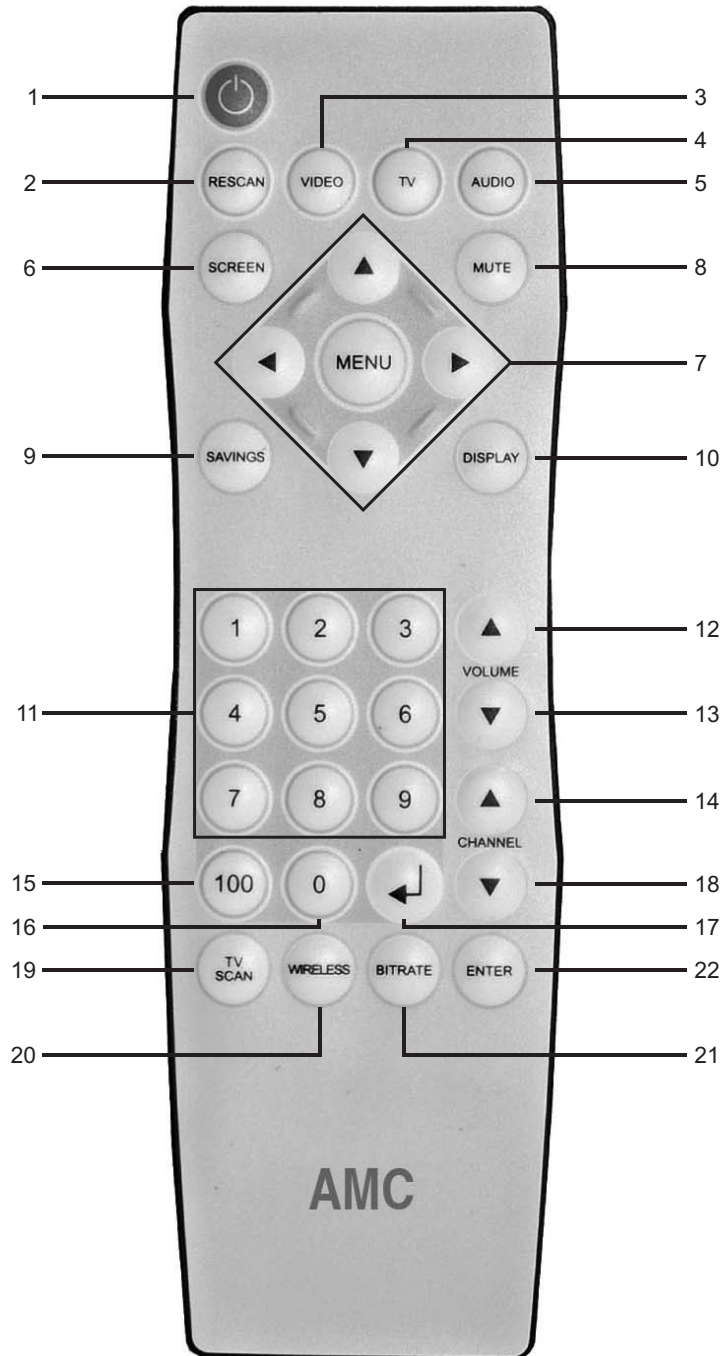
you can use the switch to reset TR1a by following procedure,

- a. Switch off the TR1a
- b. Press and hold the reset button and then switch on TR1a
- c. Wait for 5 seconds and then release the reset button.
- d. the TR1a should have then been reset to factory default setup.



# REMOTE CONTROL

(for using with receiving units like AMC i-M15a to control TR1a through IR receiver on receiving units and WiFi)



**Function of each button on Remote Control Handset:**

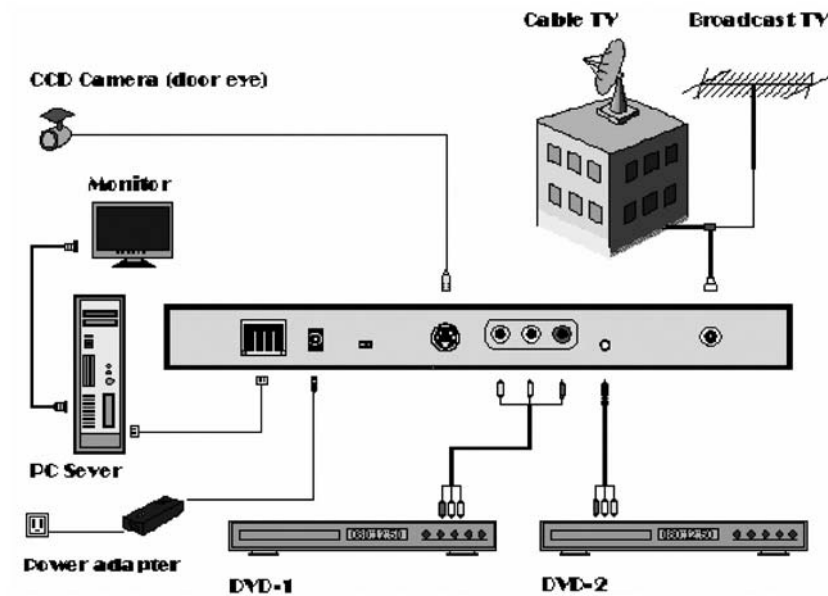
1. **Power** On/Off
2. **Rescan** for receiver to re-scan and locate all available TR1a and can select one preferable TR1a.
3. **Video** Select AV1, AV2 or S VIDEO input of the TR1a selected
4. **TV** Select Cable/Broadcast TV input of the TR1a selected
5. **Audio** STEREO, SAP, MONO
6. **Screen** Select Display aspect ratio 16:10 or 4:3
7. **▲** Menu function up  
**▼** Menu function down  
**Menu** Menu function display  
**▶** Menu function forward  
**◀** Menu function backward
8. **Mute** Audio Mute On/Off
9. **Savings** (same as remote key printing, actually this is "OUTDOOR" mode selection key)  
On (brightness 80%) / Off (brightness 45%) ->  
Outdoor (brightness 85%) / Normal (brightness 45%)  
The i-M15a screen will be in black when i-M15a battery power is too low to support higher brightness
10. **Display** Display and language selection
11. **1~9** Numeric Keys 1~9
12. **Volume ▲** Volume up
13. **Volume ▼** Volume down
14. **Channel ▲** TV channel up
15. **100** Numeric Key 100
16. **0** Numeric Key 0
17. **↶** Recall last channel
18. **Channel ▼** TV channel down

- 19. TV Scan**            Auto-detect channels with TV programs
- 20. Wireless**            Wireless channel selection
- 21. Bitrate**             Low, Mid, High
- 22. Enter**                Function confirm

# SETUP AND INSTALLATION

## Installing the TR1a

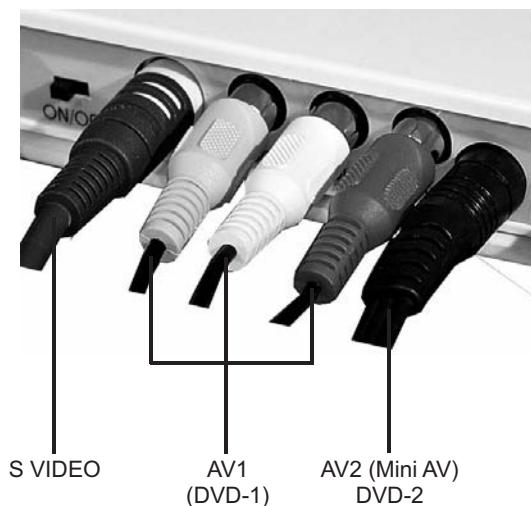
- For the best reception of the wireless signal to all areas of your house, it is best to install the TR1a near the center of your house.
- TR1a setup overview



- Connecting source devices to TR1a



1. Connect the Cable TV or Broadcast TV Antenna to the "TV Tuner" connector on rear side panel of TR1a
2. Connect source devices to "S VIDEO", "AV1" and "AV2" input connectors on rear side panel of TR1a



Use S-Video cable included in TR1a to connect your source device with S-Video output to the S Video input connector of TR1a.

Use 3 RCA plug to 3 RCA plug Composite AV cable (Yellow for Video, White for Audio-L, Red for Audio-R) included in TR1a to connect your source device like DVD Player with Composite outputs to the AV1 inputs of TR1a.

Use 3 RCA plug to 3.5mm mini jack Composite AV Cable included in TR1a to connect your source device like your 2nd DVD player with Composite outputs to the AV2 input (3.5mm mini AV jack) of TR1a.

3. Connect to DC12V Power supply and LAN through Ethernet RJ-45. Connect 12VDC/ 1.0A Power Adaptor to DC12V input connector. The RJ-45 on TR1a is for firmware updating. This function is an option for each special designed LAN as each proprietary system.
4. You now can switch the OFF/ON slide switch to ON position and start to enjoy the programs from the TR1a you just setup through receivers like AMC i-M15a, computers or other corresponding receivers.
5. The power LED (LED2) should be lighted once the OFF/ON slide switch switched to ON position

## **INSTALLING THE CORRESPONDING RECEIVERS LIKE i-M15a** (here we use i-M15a for the installing procedures )

1. Turn on TR1a – power LED will be lighted
2. Turn i-M15a (or other corresponding receivers) battery power ON by pressing the POWER (Battery Power) button on top of i-M15a for 5 seconds. Once i-M15a battery power turning ON i-M15a will be under Standby mode. (If you have power adaptor plugged into i-M15a, the i-M15a will be under Standby mode all the time.
3. Pressing ON/OFF button on top panel of i-M15a (or POWER button on Remote Control handset) you will turn i-M15a from Standby(OFF) mode to ON.
4. You will see Power on screen once turning i-M15a ON for the 1st time. Then i-M15a will scan for all available TR1a and indicated on the screen how many TR1a exist. (" 0 or 1 or 2 or 3 or .... Transmitter Exist . (Press ▲ / ▼ )" )

Remarks : When you change locations of TR1a's or i-M15a's, you should re-scan the TR1a by pressing RESCAN button on Remote Control handset aiming at IR receiver located besides i-M15a LED's on bottom of i-M15a front panel. Scanning for TR1a takes around 25 ~ 40 seconds.

5. Press ▲ or ▼ button on top and bottom of "MENU" button, you will see a list of available TR1a you can link your i-M15a to. The format of name of each available TR1a is as following:

TR1-xxxxxx (xxxxxx is IP address of each TR1a you can find on the Barcode label on the bottom of each TR1a. It is the last 6 digits of the number under the barcode)

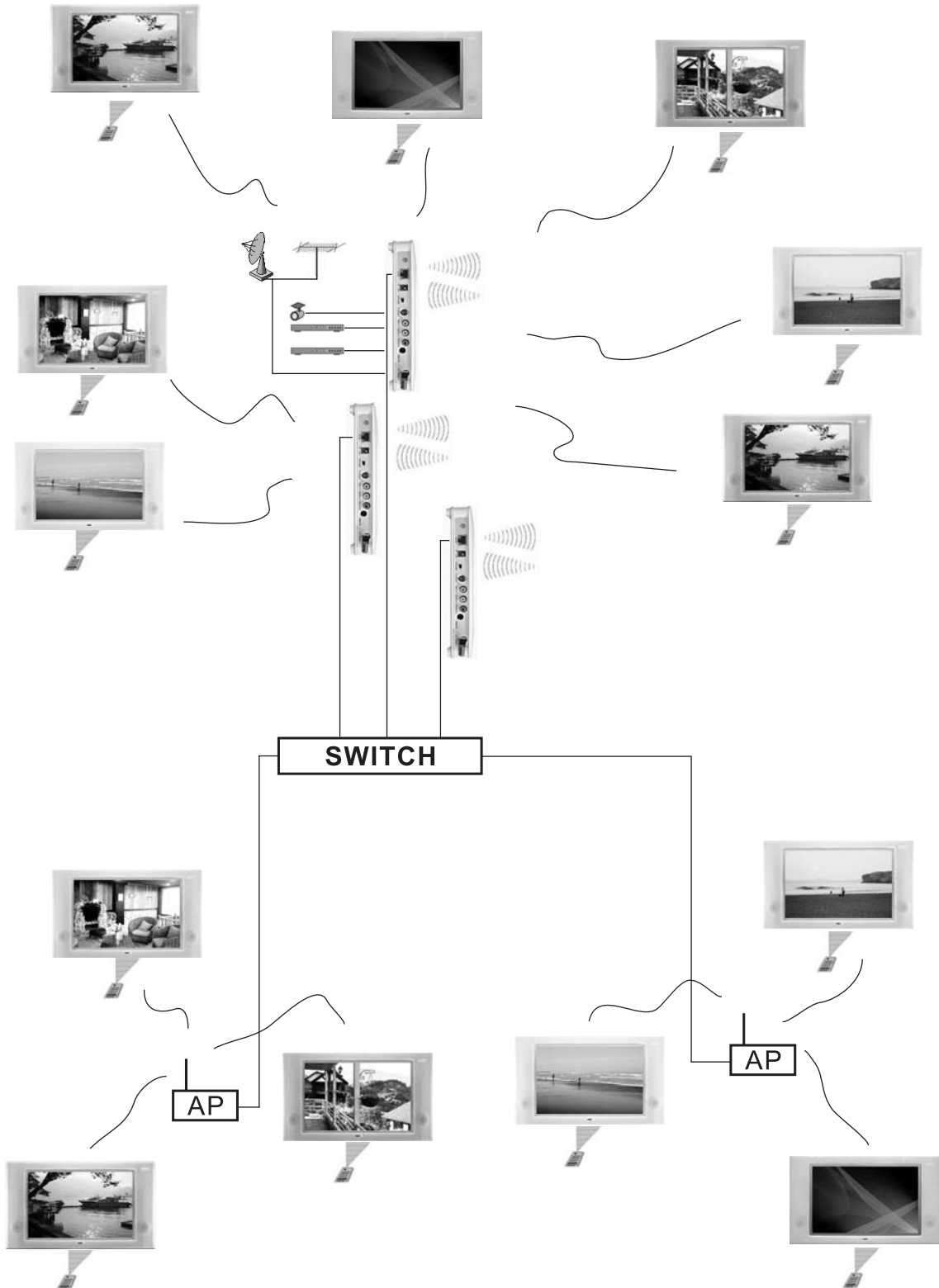
6. Use ▲ or ▼ button on top and bottom of "MENU" button you can select your preferable TR1a you want to view the programs from. You then press ENTER on remote control to confirm and link to the TR1a you selected.
7. You can start to enjoy programs from TR1a by using Remote Control handset included with TR1a by selecting TV or AV1 or AV2 or S VIDEO four sources from each TR1a.
8. If you want to select another TR1a for the i-M15a you are using, you can press RESCAN button on Remote Control hand set and repeat above procedure to make the choice.
9. When one i-M15a selected a TR1a and other i-M15a's want to connect to the same TR1a, the other i-M15a's will be under LISTENING mode. And the TR1a will be only controlled by the 1st i-M15a connected to it.
10. Scanning in TV Channels
  - a. Press the TV button on the remote to select between "Broadcast TV" and "Cable TV"

- b. Press TV SCAN button on the remote and choose your local TV system by pressing "TV SCAN" button in sequence.
- c. After choosing your TV system, press ENTER on the remote, the TV Tuner in TR1a will automatically scan and save all available channels.
- d. Now you can enjoy TV programs on your i-M15a by using the remote handset similar to normal TV set.

11. Selecting AV1, AV2 and S VIDEO

Press VIDEO button on remote, you will be able to select AV1 or AV2 or S VIDEO input source.

# Video On Demand and Broadcasting





## SPECIFICATIONS

Wireless . . . . . IEEE 802.11a 5 GHz

Video Encoder . . . . . MPEG2 video chip, DVD Quality

Video Scaler . . . . . 3D video image chip  
with Video on Demand and Broadcasting features  
Wireless IEEE 802.11a 5 GHz Wifi configuration  
Internal NTSC / PAL or SECAM / PAL dual band TV Tuner

Three external Video Inputs :

S VIDEO input : one S connector

AV1 input: Composite Video(three RCA Connectors- Video, L & R)

AV2 input: Composite Video( one 3.5mm Mini connector – Video, L & R)

MPEG II video chip Encoder

## PHYSICAL

Dimensions (W x H x D) . . . . . 125x232x32 mm

Net weight (embedded Antenna) . . . . . 2.3Kgs

Shipping weight (8 pieces) . . . . . 19.8 Kgs

Power consumption . . . . . Max12 W

Input Power – Input power to Power Adaptor . . . . . 20~30VA,100~240VAC,50/60Hz

Max Power output from Power Adaptor . . . . . 12W (12 VDC / 1A)

Weltronics Corp. reserved the right to improve its products at any time. Specifications are subject to change without notice.

# SAFETY INSTRUCTION

## 1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the appliance is operated.

## 2. RETAIN INSTRUCTIONS

The safety and operating instructions should be retained for future reference.

## 3. HEED WARNINGS

All warnings on the appliance and in the operating instructions should be adhered to.

## 4. FOLLOW INSTRUCTIONS

All operating and use instructions should be followed.

## 5. WATER AND MOISTURE

The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

## 6. CARTS AND STANDS

The appliance should be used only with a cart or stand that is recommended by the manufacturer.

- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



## 7. WALL OR CEILING MOUNTING

This equipment is not designed for use mounted on a wall or a ceiling.

## 8. VENTILATION

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.

## 9. HEAT

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

## 10. POWER SOURCES

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

## 11. POWER-CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

## 12. CLEANING

The appliance should be cleaned only as recommended by the manufacturer.

## 13. NON USE PERIODS

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

## 14. OBJECT AND LIQUID ENTRY

Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

## 15. SERVICING

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

## 16. DAMAGE REQUIRING SERVICE

The appliance should be serviced by qualified service personnel when:

- The power-supply cord or the plug has been damaged; or
- Objects have fallen, or liquid has been spilled into the appliance; or
- The appliance has been exposed to rain; or
- The appliance does not appear to operate normally or exhibits a marked change in performance; or
- The appliance has been dropped, or the enclosure is damaged.

## 17. POWER LINES

(APPLIES TO TUNER AND RECEIVERS ONLY)

An outdoor antenna should be located away from power lines.

## 18. OUTDOOR ANTENNA GROUNDING

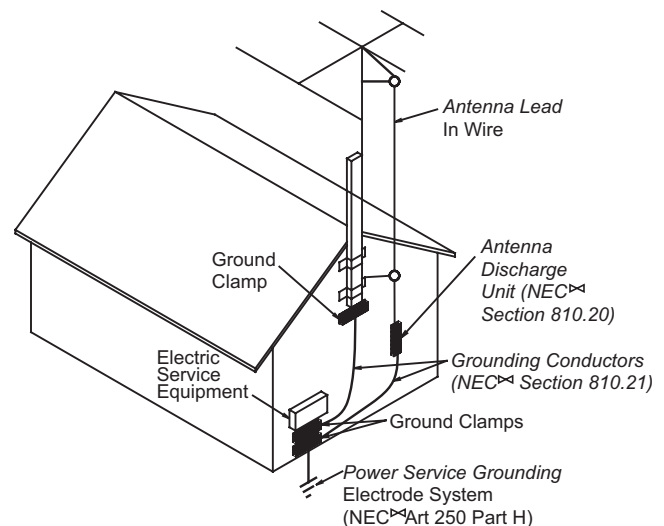
(APPLIES TO TUNER AND RECEIVERS ONLY)

If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.

Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

- Use No. 10 AWG (5.3 mm<sup>2</sup>) copper, No. 8 AWG (8.4 mm<sup>2</sup>) aluminum, No. 17 AWG (1.0 mm<sup>2</sup>) copper-clad steel or bronze wire, or larger, as a ground wire.
- Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4-6 feet (1.22-1.83 m) apart.
- Mount antenna discharge unit as close as possible to where lead-in enters house.
- Use jumper wire not smaller than No. 6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

Antenna Grounding According to the National Electrical Code



† National Electrical Code Available from Library, book stores, or National Fire Protection Association (Batterymarch Park, Quincy, MA 02269).



**WELTRONICS CORP.**

LONDON/L.A.

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